

earnestly solicited.

Prior to discussing the Office Action, assignee of the application expresses its sincere appreciation for the time, consideration and cooperation offered to the representatives of the applicant at the personal interview. While agreement with respect to allowable claim language was not reached, the Examiner did indicate that amendments consistent with those discussed at the interview and presented herewith would receive favorable consideration upon review with the Examiner's supervisor. Accordingly, the Examiner is respectfully requested to reconsider the application with a view towards issuing an immediate notice of allowance.

As noted on the Examiner's Interview Summary, applicant's representatives pointed out the benefits of providing a liner having a fully flexible collar formed of the same material as the tubular portion of the lateral liner. Applicant has provided a flexible collar which is free of the resilient retaining ring of the prior art and actually conforms to the contour of the inner wall of the main pipeline thereby forming an improved seal in the junction between the main pipeline and the lateral. It was pointed out to the Examiner that the need for repair of existing conduits at the junction of the main and lateral is driven by the fact that this is a potentially weak point in the pipeline system. Merely relining the entire length of the main line without

addressing the junction exposes a potentially weak area in the system to both infiltration and exfiltration.

Applicant's representatives also exhibited to the Examiner a specimen of the type of liner described in Long, Jr. U.S. Patent No. 5,108,533. As taught in the Long patent, a collar formed of some flexible material is provided, but the flexible material on the collar surrounds a resilient insert. It is respectfully submitted that this showing does not suggest a flexible collar which is sufficiently pliable to be deformed and remain in a conforming fashion against the inner wall of the existing main pipeline as claimed.

Not demonstrat[ed]

It was also pointed out to the Examiner that the lateral liner with collar in Long includes a resilient collar described as being formed of high density polymeric material. This provides a retainer with structural integrity. This retainer has sufficient rigidity and resiliency to be self-expanding once inserted into the main pipeline from the far end of the service lateral which is a key aspect of the Long construction. In marked contrast to this, applicant has provided a fully flexible lateral lining with collar which is to be inserted into the lateral lining from the interior of the main line, not from the outside of the service lateral as in Long.

The collar in the lateral liner in Long includes a resilient member which is temporarily compressed or compacted radially

inwardly into position within the service pipe and designed to expand beyond the inner diameter of the service pipe when the retainer is positioned in the main pipe. Compression of this resilient stiffening member allows Long to insert the liner from the service lateral and pull back once the retainer has expanded to insure the correct position. See the description of this resilient action in Long at column 7 line 4-11. Similarly, the temporary compression of the retainer is also described at column 14, lines 27 through 36 and again at column 15, lines 23-26.

In marked contrast to this, applicant's fully flexible collar is essentially shapeless and fully conformable and assumes the shape of the interior surface of the main passageway which allows for forming the improved seal at the junction between the lateral and main line. In essence, Long provides for a temporary bending of the retainer to allow installation. Applicant provides a conformable collar for forming the improved seal.

Applicant has also added new claim 12 to define the flexible collar as free of additional stiffer material to distinguish further from Long. It is respectfully submitted that there is support for this new limitation based on the overall teachings of the specification at page 7, lines 25-31 and the showing in Fig. 7. Thus, it is respectfully submitted that this does not add new matter to the application. Applicant further submits that new claim 12 is patentable for the same reasons as claims 9-11 as set

forth below.

Turning to the Office Action, the Examiner rejected claim 9 under 35 U.S.C. §102(b) as being anticipated by Long, Jr., et al., U.S. Patent No. 5,108,533. The Examiner considered that Long taught a flexible tubular member with a flexible retainer secured for positioning with the main pipeline. The Examiner noted that terms used in the claim, such as "flexible or being impregnated" and "adapted to engage and conform," did not function as positive limitations.

This rejection is respectfully traversed for the following reasons.

Applicants' amended claims call for a flexible collar of the same flexible materials as the tubular portion. In contrast Long requires and describes a sufficiently resilient retaining ring to do precisely that -- retain the collar within the lumen of the main pipeline as the lateral lining is pulled back towards the entry to the service lateral prior to cure of the resin. Applicant's goal is to provide a fully flexible and conformable liner which can be everted into the lateral from the main pipeline with the flexible collar conforming to the interior wall of the main pipeline at the intersection with the lateral. As noted applicant's liner is designed to be installed from the main line into the lateral.

During the course of the interview, it became apparent that a

significant distinction between the type of liner taught by Long and that claimed by applicant is that applicant's collar is formed of the same material as the flexible tubular portion of the liner -- not a collar which is sufficiently rigid to act as retainer when the liner is pulled back as in Long.

During the interview the undersigned discussed various ways to claim these features of applicant's liner. It respectfully submitted that by reciting that the collar is formed of the same flexible resin as resin absorbable fibrous material as the tubular portion of the liner, is sufficient to exclude stiffening members such as the retaining ring of Long. This is due to the fact that upon installation of the lateral liner from the main pipeline into the lateral, the flexible liner will be everted as disclosed in the specification at the last paragraph on page 4 at lines 21-27. Thus, a relatively hard resilient self-expanding member, such as the retaining ring in Long, would interfere with installation and eversion of the lateral lining tube from the main pipeline out.

Applicants have also amended claim 9 to delete the objected to phrases. It is respectfully submitted that the positive limitation that the flexible collar is formed of the same resin impregnable material as the tubular liner serves to distinguish applicant's liner from that of Long.

For these reasons, applicant respectfully submits that claim 9 as amended is patentable over Long and that the rejection under

Section 102 should be withdrawn.

The Examiner also rejected claims 10-11 under 35 U.S.C. §103(a) over Long as applied above, recognizing that it did not teach reinforcement at the junction between the tubular material in the collar or beaded end for reinforcement. The Examiner considered such reinforcement as well known to those of ordinary skill in the art. The Examiner noted that Long did teach reinforced portions to secure grommets and thus it would be obvious to use a reinforced portion at the junction.

This rejection is also respectfully traversed.

With respect to the rejection of claims 10 and 11 Long provides reinforcing grommets towards the leading end portion of the liner. However, these are included so that the liner can be pulled back towards the entrance to the lateral once the retaining ring has returned to its circular form upon entry into the main pipeline. As can be seen clearly in Figs 4, 5 and 9 of Long, the reinforcement and grommets are located on the tubular surface of the liner. This does not show or suggest a reinforcement at the junction of the tubular portion and flexible collar as specified in claims 10 and 11. This conclusion is highlighted by the fact that Long also instructs that the retainer within the collar is of a diameter to allow it to expand beyond the inner diameter of the lateral pipeline once it is in position within the main pipeline.

As discussed with the Examiner, the reinforcements provided

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in Long are along the tubular wall of the lateral liner. These reinforcements permit the tube to be pulled away from the lateral once the resilient retaining ring has expanded in the main pipeline. There is simply no teaching or suggestion in Long to provide reinforcement at the junction between the tubular portion and the collar or at beaded end for reinforcement as acknowledged by the Examiner. Absent some suggestion to do this, applicant respectfully submits that claims 10 and 11 are patentable over Long in their own right. However, applicant further notes that these claims are dependent upon claim 9 which is deemed to be patentable for the reasons set forth above in discussing the rejection under Section 102.

Accordingly, it is respectfully that claims 10 and 11 are also patentable over Long and that the rejection under Section 103 should be withdrawn.

Claim 12 further defines the material of the collar as being the same flexible fibrous material as the tubular portion and which is free of other material. As noted, this is not shown or suggested in Long. Thus, not only is claim 11 patentable in its own right, but is patentable for the reasons set forth above with respect to claim 9.

Applicant notes with appreciation that the Terminal Disclaimer filed on August 25, 1998 had been deemed proper and is recorded. Thus, the double patenting rejection has been

withdrawn.

In sum, applicant's representatives again thank Examiner Nolan for the consideration during the personal interview and the indication that the matter would be favorably reviewed with her supervisor Mr. Robinson.

It is respectfully submitted that for the reasons set forth during the interview and restated above, claims 9-12, all the claims now in the application are in condition for immediate allowance. Accordingly, Examiner is respectfully requested to review the application and these remarks at an early date with a view towards issuing a favorable action thereon. If upon review of the Amendment, the Examiner is unable to issue an immediate Notice of Allowance, Examiner Nolan is respectfully requested to telephone the undersigned with a view towards resolving any outstanding issues.

Early and favorable action is earnestly solicited.

Respectfully submitted,



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